Efficiency of a Multilayer-Coated, Ion-etched, Laminar Holographic Grating in the 14.5-16.0-nm Wavelength Region	X24C

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The efficiency of an ion-etched laminar holographic grating was measured at near-normal incidence in the 14.5-16.5-nm wavelength range. The grating had an electron-beam-evaporated Mo/Si multilayer coating matched to the grating groove depth. The efficiency peaked at 16.3% in the first inside order at 15.12 nm and 15.0% in the first outside order at 14.94 nm. These are believed to be the highest efficiencies obtained to date from a multilayer-coated laminar grating at near-normal incidence in the EUV. Zero and even orders were almost completely suppressed. The grating groove efficiency in the first order was 34.1% near the theoretical limit of 40.5%